

they have found a black birch, and lumbermen everywhere from the Adirondacks to New Brunswick are sure that they have two birches which they are loth to believe can be age variations only. With them it is a gray or silver birch when the bark on the trunks can be removed like that on the paper birch, but when the bark is furrowed with age it is another kind; and it must be admitted that in this case there is little about the bark of a large log to indicate its relationship with a young tree of the same species. There is no commercial distinction, at least in the north, between the timber of the black and yellow birch, and birch floors are invariably called cherry birch floors but are usually if not always made of yellow birch. In fact the black birch in New England never grows to a size suitable for using in anything except in small dimensions such as chair-stuff, baby-wagon spokes, etc. The black birch is hardly a northern tree and the area covered by it in Vermont and New Hampshire is quite limited. It grows in Western Vermont and is frequent in Burlington; and it is found in the lower valleys of the Connecticut and Merrimack and in southeastern New Hampshire. Its range in the provinces of Quebec and Ontario I do not know, but it is abundant at and about Ottawa. Its range as well as its abundance in Michigan, Wisconsin, Minnesota, and Iowa is unknown. In short the two birches *B. lenta* and *B. lutea* have been so confounded by lumbermen and botanists that no dependence whatever can be placed on any published statement as to either range or frequency of the black birch in the north, northeast or northwest.—W. H. BLANCHARD, Westminster, Vermont.

ARRHENATHERUM ELATIUS β TUBEROSUM IN AMERICA.—In a recent number of RHODORA (vol. 13, p. 9, Jan., 1911) the writer described and figured the subterranean organs of a grass supposed to be *Cinna arundinacea* L. During the past spring a number of specimens of these clustered corms were sent to the Department of Agriculture from various stations on the southern Atlantic coastal plain. The frequency with which these were received suggested some recently introduced species. Mr. Cooper of Decatur, Georgia, who first sent the puzzling underground organs was asked to send flowering specimens. This he kindly did, and the plant is found to be *Arrhenatherum elatius* β *tuberosum* (Gilib.) Halac. (*Avena tuberosa*

Gilib., 1791; *Avena bulbosa* Willd., 1799; *Holcus bulbosus* Schrad.; *Arrhenatherum bulbosum* Presl; *Avena elatior* var. *tuberosa* Aschers.) This common European species appears to be a recent immigrant. There is no record of its appearance in this country earlier than October, 1910, when the first specimen was received from Mr. Cooper. As yet the only specimens received from the Manual region are from King George, Caroline and Chesterfield counties, Virginia. The variety differs from *Arrhenatherum elatius* chiefly in production of clusters of moniliform corms. The spikelets are similar to those of the species but the hairs at the base of the florets are shorter and the second floret is awned. In the species the second floret is usually awnless but sometimes bears a short awn.

Cinna arundinacea has not been found with the clusters of moniliform corms. Late fall specimens show a single basal internode thickened and corm like, as in *Phleum pratense* but much more developed.—AGNES CHASE.

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